

1. The first step is to identify the problem. This involves understanding the current situation and the goals that need to be achieved.

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Attorney Docket No.	COMP:0080	Total Pages	59
First Named Inventor or Application Identifier			
Ligy Kurian			
Express Mail Label No.	EL 432 943 174 US		

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Box Patent Application
Washington, DC 20231

1. ☒ Fee Transmittal Form
(Submit an original, and a duplicate for fee processing)
2. ☒ Specification **Total Pages 25**
(preferred arrangement set forth below)
 - Descriptive
 - Cross References to Related Application
 - Statement Regarding Fed sponsored R & D
 - Reference to Microfiche Appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings *(if filed)*
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure

6. ☐ Microfiche Computer Program (*Appendix*)
7. Nucleotide and/or Amino Acid Sequence Submission
(*if applicable, all necessary*)
- a. ☐ Computer Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

3. ☒ Drawing(s) (35 USC 113) *Total Sheets* 8
Total Pages 24

4. **Oath or Declaration**
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37CFR 1.63(d))
- (for continuation/divisional with Box 17 completed)*
- [Note Box 5 below]***
- i. ☐ DELETION OF INVENTOR(S)
- Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).

5. ☐ Incorporation By Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

ACCOMPANYING APPLICATION PARTS

8. ☒ Assignment Papers (cover sheet & document(s))
9. ☐ 37 CFR 3.73(b) Statement ☒ Power of Attorney
(where there is an assignee)
10. ☐ English Translation Document (if applicable)
11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503)
14. ☐ Small Entity ☐ Statement filed in prior application
Statement(s) Status still proper and desired
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Other

- 17 ☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: /

18. CORRESPONDENCE ADDRESS

- ☐ Customer Number or Bar Code Label ☐ Correspondence address below

(Insert Customer No. or Attach bar code label here)

NAME	Robert A. Van Someren				
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FEE TRANSMITTAL**Complete if Known**

Application Number	Unassigned
Filing Date	Herewith
First Named Inventor	Ligy Kurian
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	COMP:0080/VAN

TOTAL AMOUNT OF PAYMENT (\$) 988.00

METHOD OF PAYMENT (check one)

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to

Deposit Account Number **03-2630/COMP:0080/VAN**

Deposit Account Name **Compaq Computer Corporation**

- ☐ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 ☐ Charge the Issue Fee Set in 37 CFR 1.18 at the Mailing of the Notice of Allowance, 37 CFR 1.31(b)

2. ☐ Payment Enclosed:
☐ Check ☐ Money Order ☐ Other

FEE CALCULATION (fees effective 10/01/96)**1. FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
101	790	201	395	Utility filing fee	<u>690.00</u>
106	330	206	165	Design filing fee	—
107	540	207	270	Plant filing fee	—
108	790	208	395	Reissue filing fee	—
114	150	214	75	Provisional filing fee	—
SUBTOTAL (1)				(\$)	<u>690.00</u>

2. CLAIMS

	Extra	Fee from below		Fee Paid
Total Claims <u>30</u> - 20 =	<u>10</u>	X <u>18</u>	=	<u>180.00</u>
Independent <u>4</u> - 3 =	<u>1</u>	X <u>78</u>	=	<u>78.00</u>
Claims				

Multiple Dependent Claims — X — = —

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
103	22	203	11	Claims in excess of 20
102	82	202	41	Independent claims in excess of 3
104	270	204	135	Multiple dependent claim
109	82	209	41	Reissue independent claims over original patent
110	22	210	11	Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) **988.00**

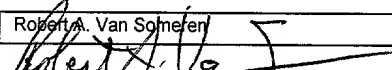
FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	—
127	50	227	25	Surcharge - late provisional filing or cover sheet.	—
139	130	139	130	Non-English specification	—
147	2,520	147	2,520	For filing a request for reexamination	—
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	—
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	—
115	110	215	55	Extension for response within first month	—
116	400	216	200	Extension for response within second month	—
117	950	217	475	Extension for response within third month	—
118	1,570	218	755	Extension for response within fourth month	—
119	310	219	155	Notice of Appeal	—
120	310	220	155	Filing a brief in support of an appeal	—
121	270	221	135	Request for oral hearing	—
138	1,510	138	1,510	Petition to institute a public use proceeding	—
140	110	240	55	Petition to revive unavoidably abandoned application	—
141	1,320	241	660	Petition to revive unintentionally abandoned application	—
142	1,320	242	660	Utility issue fee (or reissue)	—
143	450	243	225	Design issue fee	—
144	670	244	335	Plant issue fee	—
122	130	122	130	Petitions to the Commissioner	—
123	50	123	50	Petitions related to provisional applications	—
126	240	126	240	Submission of Information Disclosure Stmt	—
581	40	581	40	Recording each patent assignment per property (times number of properties)	<u>\$40.00</u>
146	790	246	395	Filing a submission after final rejection (37 CFR 1.129(a))	—
149	790	249	395	For each additional invention to be examined (37 CFR 1.129(b))	—
Other fee (specify)				—	—
Other fee (specify)				—	—
SUBTOTAL (3)				(\$)	<u>40.00</u>

* Reduced by Basic Filing Fee Paid

SUBMITTED BY

Complete (if applicable)

Typed or Printed Name	Robert A. Van Someren	Reg. Number	36,038
Signature		Date	August 16, 2000
		Deposit Acct. User ID	03-2630/COMP:0080/VAN

U.S. Patent Application For

WIRELESS COMMUNICATION SYSTEM
UTILIZING ANTENNA DONGLE

By:

Ligy Kurian
James Jensen
Paul Drew

09639943-084600

"EXPRESS MAIL" MAILING LABEL	
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Pursuant to 37 C.F.R. § 1.10, I hereby certify that I am personally depositing this paper or fee with the U.S. Postal Service, "Express Mail Post Office to Addressee" service on the date indicated above in a sealed envelope (a) having the above-numbered Express Mail label and sufficient postage affixed, and (b) addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.	
Signature:	<i>Lynda Howell</i>
Printed Name:	Lynda Howell

WIRELESS COMMUNICATION SYSTEM UTILIZING ANTENNA DONGLE

5

FIELD OF THE INVENTION

The present invention relates generally to a wireless communication system, and more particularly to a wireless communication system that utilizes a dongle secured to an electronic device to transmit or receive data.

BACKGROUND OF THE INVENTION

Many electronic systems are composed of separate components electrically coupled together by cabling. Examples of component electronics systems include audio and video equipment, computer systems, and some appliances. Computers, typically, consist of several different electronic devices coupled together to form a computing system. A typical computer consists of a central unit, housing a microprocessor, and a number of additional components connected by cables to the central unit. Examples of additional components include: a monitor, a printer, a mouse, a keyboard, a scanner or speakers. Typically, each component has its own cable to connect the component to the central unit so that power or data may be transferred between the components. Thus, the greater the

number of components, the greater the number of cables
routed amongst the components of the system.

Routing numerous cables between electronic components
5 increases the complexity of assembling a component system.
For example, routing cables between the various components
of an audio/video system, appliances or computer system can
be a confusing and difficult task for the typical consumer.
Cables also make it difficult to move components once the
10 system is connected. Additionally, a large number of cables
routed about the various components can make the system look
cluttered and unattractive.

Wireless systems have been used to transmit data
15 between some components of an electronic system, such as a
remote control for a television. However, these systems
typically require the components be in direct line-of-sight
or utilize an obtrusive antenna system, thus adding to
desktop clutter.

20

Thus, it would be advantageous to have an unobtrusive
wireless communication system that could allow information
to be communicated wirelessly between the components of an
electronics system, or at least reduce the number of cables

normally used to connect the various components of an electronic system.

5

SUMMARY OF THE INVENTION

25639960-0010000

The present invention features an electronic component system having a plurality of separate devices, of which at least one of the devices has an electrical connector. The system also includes a wireless communication system. The wireless communication system enables information to be communicated wirelessly between separate devices. The wireless communication system includes a dongle. The dongle has an antenna for transmitting or receiving information and a second electrical connector for mating engagement with the electrical connector on at least one of the devices. The wireless communication system may utilize bluetooth technology.

According to another aspect of the present invention, a wireless communication system for a computer is featured. The wireless communication system includes a dongle and a transceiver. The dongle has an electrical connector and an antenna. The transceiver is electrically coupled to a central processor and the dongle. The wireless communication system may utilize bluetooth technology.

According to another aspect of the present invention, a method is featured of communicating information wirelessly between components of a computer system. The method
5 includes the step of coupling a first communication dongle to a first component of a computer system, the first communication dongle having an antenna to transmit and receive information. The method may also include the step of coupling a second communication dongle to a second
10 component of a computer system, the second communication dongle having an antenna to receive information. The method may also include the step of disposing a transceiver in the first communication dongle.

15 According to another aspect of the present invention, a computer system is featured. The computer system has a central unit, an external device, and a wireless communication system for communicating information between the central unit and the external device. The central unit
20 has an enclosure with an electrical connector and a processor. The wireless communication system includes a dongle. The dongle has an antenna for transmitting and receiving information and an electrical connector for mating engagement with the electrical connector on the central
25 unit. The wireless communication system also has a data

transceiver electrically coupled to the communication
dongle. The wireless communication system may utilize
bluetooth technology.

5

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will hereafter be described with
reference to the accompanying drawings, wherein like
reference numerals denote like elements, and:

10

Figure 1 is a block diagram of a computer system,
according to one preferred embodiment of the present
invention;

15

Figure 2 is a perspective view of a communication
dongle;

20

Figure 3 is a top view of a communication dongle with
internal components marked by dashed lines;

Figure 4 is a side view of the communication dongle of
Figure 3 with internal components marked by dashed lines;

Figure 5 is a top view of an alternative embodiment of a communication dongle with internal components marked by dashed lines;

5 Figure 6 is a side view of the communication dongle of Figure 5 with internal components marked by dashed lines;

10 Figure 7 is a top view of an alternative embodiment of a communication dongle with internal components marked by dashed lines;

15 Figure 8 is a top view of an alternative embodiment of a communication dongle with internal components marked by dashed lines;

20 Figure 9 is a side elevational view of an embodiment of a wireless communication system for a computer with internal components marked by dashed lines;

20 Figure 10 is a side elevational view of an alternative embodiment of a wireless communication system for a computer with internal components marked by dashed lines;

Figure 11 is a side elevational view of an alternative embodiment of a wireless communication system for a computer with internal components marked by dashed lines;

5 Figure 12 is a side elevational view of an alternative embodiment of a wireless communication system for a computer with internal components marked by dashed lines; and

10 Figure 13 is a perspective view of a computer system utilizing a wireless communication system, according to one embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

15 Referring generally to Fig. 1, a block diagram is illustrated depicting an exemplary computer system, generally designated by the reference numeral 20. Computer 20 may be any of a variety of different types, such as a workstation, a desktop computer, or a notebook computer. In
20 the illustrated embodiment, a processor 22 controls the operation of the computer 20. Computer 20 includes a power supply 24 to supply electrical power to various components of system 20.

Processor 22 utilizes programming to control the operation of the computer system 20. Memory is coupled to processor 22 to store and facilitate execution of the programming. In the illustrated embodiment, processor 22 is
5 coupled to a hard drive 26 and RAM 28. Computer system 20 can include additional components, such as a disk drive, a tape drive or some other memory storage device. Non-volatile memory can also include read only memory (ROM), such as an EPROM, to be used in conjunction with RAM 26. A
10 variety of memory modules, such as DIMMs, DRAMs, SDRAMs, SRAMs, etc. can be utilized for a given device or application.

Various components of computer 20 may be coupled to
15 processor 22, depending upon the desired functions of computer 20. In the illustrated embodiment, a user interface 30 is coupled to processor 22. Examples of user interface 30 include a keyboard, a mouse, a joystick, buttons, switches, a light pen, or a voice recognition
20 system. A display 32 is coupled to processor 22. Examples of display 32 include a computer monitor, a television screen, or an audio speaker. A peripheral device 34, such as a printer or a scanner, also can be coupled to the processor 22. Additionally, processor 22 may be coupled to

an external communication system 36, such as a network or telephone system.

In the illustrated embodiment, a data
5 transmitter/receiver 38, or transceiver, is used to enable
wireless communication between the various remote components
of computer system 20 and its central unit 40 containing
processor 22, e.g., the main processor unit of a personal
computer. As a transmitter, transceiver 38 converts data
10 into electromagnetic waves. As a receiver, transceiver 38
converts electromagnetic waves into data. In the
illustrated embodiment, central unit 40 includes processor
22, power supply 24, hard drive 26, RAM 28, and data
transceiver 38.

15

Referring generally to Figure 2, an exemplary
embodiment is featured of a communication dongle 42 housing
data transceiver 38. Communication dongle 42 is disposed on
the exterior of an enclosure. Communication dongle 42 has a
20 main body 44 and a connector portion 46. In the exemplary
embodiment, data transceiver 38 is disposed within main body
44. Connector portion 46 is used to couple data transceiver
38 to central unit 40. In the exemplary embodiment, main
body 44 and connector portion 46 form an integrated unit,
25 the weight of which is supported entirely by the connection

between the connector portion 46 and the external electrical connector. Consequently, it is preferable to manufacture the dongle in a small form, low in weight.

5 Main body 44 can be comprised of a variety of materials. In the exemplary embodiment, main body 44 is comprised of a moldable plastic. A recess 48 is formed in main body 48 to provide a gripping surface for installing and removing communication dongle 42 from central unit 40.

10 Referring generally to Figures 3 and 4, the exemplary embodiment of data transceiver 38 within communication dongle 42 utilizes an integrated circuit (IC) 50 mounted on a circuit board 52. Circuit board 52 electrically couples
15 IC 50 to an antenna 54 and to an electrical connector 56. Electrical connector 56, in turn, couples IC 50 to central unit 40. Electrical connector 56 also secures communication dongle 42 to central unit 40.

20 In the exemplary embodiment, computer system 20 utilizes "bluetooth" technology. Bluetooth is an always-operating short-range radio that is a cross-industry standard for wireless communications. In this embodiment, IC 50 and circuit board 52 are designed to transfer
25 information received via antenna 54 to processor 22 and to

transmit information over antenna 54 under the direction of processor 22. The configuration of IC 50 and board 52 depends on the specific wireless technology implemented. For example, data transceiver 38 can utilize a non-bluetooth technology, such as a standard radio frequency (RF) transmitter and receiver.

In the exemplary embodiment, electrical connector 56 is a universal serial bus (USB) connector. USB is an external bus standard. A USB system can connect as many as 127 peripheral devices simultaneously, such as a mouse, a keyboard, a printer, video equipment, and a scanner. A USB system also is able to support "Plug and Play." Plug and Play is an industry standard architecture for a 32-bit bus. Additionally, USB allows a system to be hot pluggable, i.e., a USB device can be installed or removed without turning off the system power.

Antenna 54 is configured for the technology used, bluetooth, standard RF, or some other technology. For clarity, antenna 54 is not shown in Figure 4.

Referring generally to Figures 5 and 6, communication dongle 42 can be configured in a variety of different shapes, sizes and orientations. In the illustrated

embodiment, communication dongle 42 is configured so that main body 44 and connector portion 46 are at a right angle to each other. Thus, for example, rather than extending outward from central unit 40, main body 44 can be positioned
5 so that it extends along the side of central unit 40.

Referring generally to Figure 7, rather than a USB port, a serial port, or some other communication standard port, can be used to couple processor 22 to data transceiver
10 38. In the embodiment illustrated in Figure 7, system 20 utilizes a communication dongle 58 connected to central unit 40 by a serial connector 60. Serial connector 60 couples IC 50 to central unit 40. The connector portion 46 includes two screws 62 that thread into a corresponding connector on
15 central unit 40 to secure communication dongle 58 to the central unit 40.

Referring generally to Figure 8, a portion of data transceiver 38 can be disposed within central unit 40. For
20 example, IC 50 and circuit board 52 can be disposed within central unit 40. In the illustrated embodiment, an antenna 54 is disposed within a communication dongle 64. Antenna connector 66 secures communication dongle 64 to central unit 40. Furthermore, the antenna connector 66 couples antenna
25 54 to central unit 40, and IC 50.

Referring generally to Figure 9, communication dongle 42, as illustrated in Figures 3 and 4, is secured to a USB connector 68 on a side 70 of central unit 40. Side 70 can be any of the sides of central unit 40, such as the front, back, left, right, or top. In the illustrated embodiment, main body 44 extends directly outward from side 70.

Referring generally to Figure 10, communication dongle 42, as illustrated in Figures 5 and 6, is similarly secured to central unit 40. In this embodiment, main body 44 extends downward along side 70. However, main body 44 also can be oriented to extend upward along side 70.

Referring generally to Figure 11, communication dongle 58, as illustrated in Figure 7, is secured to central unit 40. Dongle 58 is secured by threading screws 62 of serial connector 60 into a corresponding serial connector 72 on side 70 of central unit 40.

20

Referring generally to Figure 12, communication dongle 64, as illustrated in Figure 8, is secured to central unit 40 by inserting antenna connector 66 into a corresponding antenna connector 74 on side 70 of central unit 40. Antenna

connectors 66 and 74 couple antenna 54 to central unit 40,
and IC 50 disposed therein.

Referring generally to Figure 13, a communication
5 dongle can be used to enable one component of a computer
system 78 to communicate wirelessly with another component
of the system. System 78 illustrates a few of the variety
of different configurations of components and devices that
can be used in a wireless computer system. Some or all of
10 the devices can use a communication dongle, while other
devices can be hard wired or use a different device to
communicate wirelessly.

In the illustrated embodiment, a communication dongle
15 80 is coupled to a central unit 40 to enable central unit 40
to communicate wirelessly with several peripheral devices.
Communication dongle 80 can be any of the embodiments of a
communication dongle described above or otherwise designed
for a given application. Preferably, the wireless
20 communication system utilizes bluetooth technology.

In the illustrated embodiment, communication dongle 80
also is used with a printer 82 to enable printer 82 to
communicate with the central unit 40. Printer 82 can use
25 communication dongle 80 to communicate with other peripheral

devices. System 78 also includes a scanner 84. In this
embodiment, scanner 84 uses an antenna wire 86, rather than
a communication dongle 80, to communicate wirelessly with
communication dongle 80 of central unit 40. System 78 also
5 includes a keyboard 88. In the illustrated embodiment,
keyboard 88 is designed for wireless communication with
central unit 40 via bluetooth technology. However, the
wireless communication elements of keyboard 88 are built
into keyboard 88, therefore, there are no external
10 communication components, such as communication dongle 80 or
antenna wire 86. System 78 also includes a monitor 90. In
the illustrated embodiment, monitor 90 is hardwired to
central unit 40. However, monitor 90 also can be wirelessly
coupled to central unit 40 with a communication dongle.

15

It will be understood that the foregoing description is
of preferred embodiments of this invention, and that the
invention is not limited to the specific forms shown.
Additionally, use of the terms "first" and "second"
20 throughout this document is for aiding in description of the
overall system, and should not be construed as requiring a
specific orientation or arrangement of components. These
and other modifications may be made in the design and
arrangement of the elements without departing from the scope
25 of the invention as expressed in the appended claims.

CLAIMS

What is claimed is:

5 1. An electronic system, comprising:

 a plurality of separate devices, wherein at least
 one device has a first electrical connector
 externally exposed;

10

 a wireless communication system for communicating
 information between the plurality of separate
 devices, the wireless communication system
 including:

15

 a dongle, the dongle having an antenna for
 transmitting and receiving information
 and a second electrical connector for
 selective mating engagement with the
20 first electrical connector.

2. The system as recited in claim 1, further
comprising:

a transmitter electrically coupled to the antenna.

5

3. The system as recited in claim 2, wherein the
transmitter is disposed within the dongle.

4. The system as recited in claim 1, further
10 comprising:

a receiver electrically coupled to the antenna.

5. The system as recited in claim 4, wherein the
15 receiver is disposed within the dongle.

6. The system as recited in claim 1, wherein the
communication system utilizes a wireless communication
standard.

20

7. The system as recited in claim 6, wherein the
wireless communication standard is the bluetooth wireless
communication standard.

8. The system as recited in claim 7, further comprising:

an integrated circuit, the integrated circuit
5 being a transceiver electrically coupled to the antenna.

9. The system as recited in claim 8, wherein the integrated circuit is disposed within the dongle.

10
10. The system as recited in claim 9, wherein the first and second electrical connectors are uniform serial bus connectors.

15
11. The system as recited in claim 8, wherein the integrated circuit is disposed within the enclosure and electrically coupled to the antenna in the dongle.

12. A wireless communication system for a computer,
20 comprising:

a dongle, the dongle having an electrical connector and an antenna, the electrical connector being configured for connection to
25 an external port of a computer; and

a transceiver electrically coupled to a central processor and to the dongle.

5 13. The system as recited in claim 12, wherein the transceiver is a integrated circuit utilizing bluetooth technology.

10 14. The system as recited in claim 13, wherein the integrated circuit is disposed within the dongle.

15 15. The system as recited in claim 14, the dongle having a protective cover extending over the antenna and integrated circuit.

16 16. The system as recited in claim 12, wherein the electrical connector is a uniform serial bus connector.

20 17. The system as recited in claim 16, wherein a first dongle is coupled to a central unit and a second dongle is coupled to a peripheral device.

25 18. The system as recited in claim 17, wherein the peripheral device is a printer.

19. A method of communicating information wirelessly
between components of a computer system, comprising:

5 coupling a first communication dongle having an
 antenna to a first component of a computer
 system;

10 transmitting and receiving information to other
 computer system components via the antenna.

20. The method as recited in claim 19, further
comprising:

15 coupling a second communication dongle to a second
 component of a computer system, the second
 communication dongle having an antenna to
 receive information.

21. The method as recited in claim 19, further
20 comprising:

 disposing a transceiver in the first communication
 dongle.

22. The method as recited in claim 21, further comprising:

5 disposing a transceiver in the second communication dongle.

23. The method as recited in claim 19, further comprising:

10 configuring the first and the second communication dongles to transmit and receive information according to a wireless communication standard.

15 24. The method as recited in claim 23, wherein the communication dongles use bluetooth technology.

25. A computer system, comprising:

20 a central unit having an enclosure, the enclosure having a first electrical connector and a processor disposed therein;

an external device; and
25

a wireless communication system for communicating information between the central unit and the external device, the wireless communication system including:

5

a communication dongle, the dongle having an antenna for transmitting and receiving information and a second electrical connector for mating engagement with the first electrical connector; and

10

a data transceiver electrically coupled to the communication dongle.

15 26. The system as recited in claim 25, wherein the data transceiver is disposed within the communication dongle.

20 27. The system as recited in claim 25, wherein the wireless communication system utilizes an industry standard for wireless communication devices.

25 28. The system as recited in claim 27, wherein the industry standard is bluetooth.

29. The system as recited in claim 25, wherein the first and second electrical connectors are uniform serial bus connectors.

5 30. The system as recited in claim 29, wherein the integrated circuit is disposed within the enclosure and electrically coupled to the antenna in the communication dongle.

10

ABSTRACT OF THE DISCLOSURE

The present invention features an electronic component system. The electronic component system can be a computer system. The system includes a wireless communication system. The wireless communication system enables information to be communicated wirelessly between separate components of the system. The wireless communication system includes a dongle. The dongle has an antenna for transmitting and/or receiving information and an electrical connector for mating engagement with an electrical connector on at least one of the separate devices. The wireless communication system can utilize bluetooth wireless communication technology.

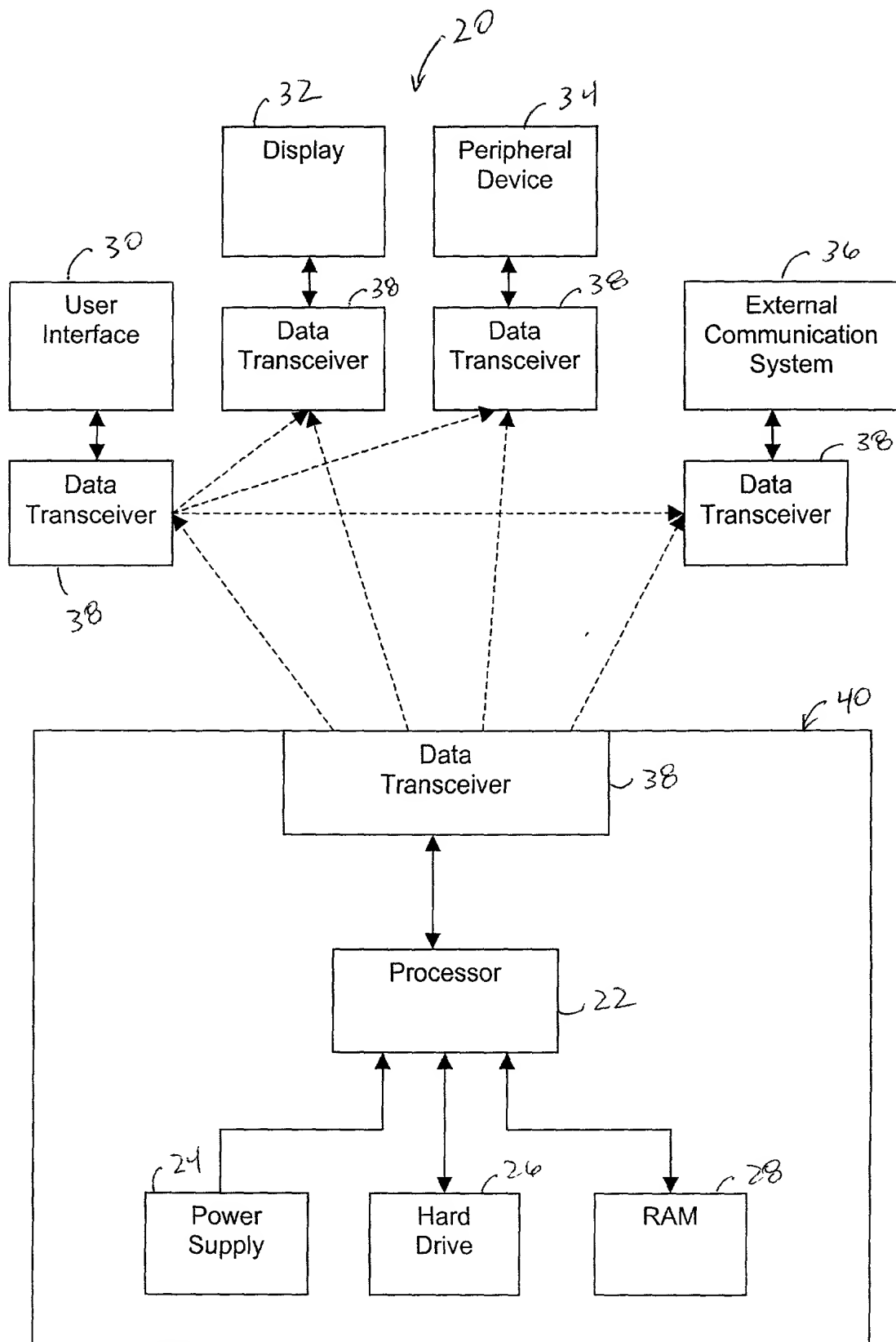


Fig. 1

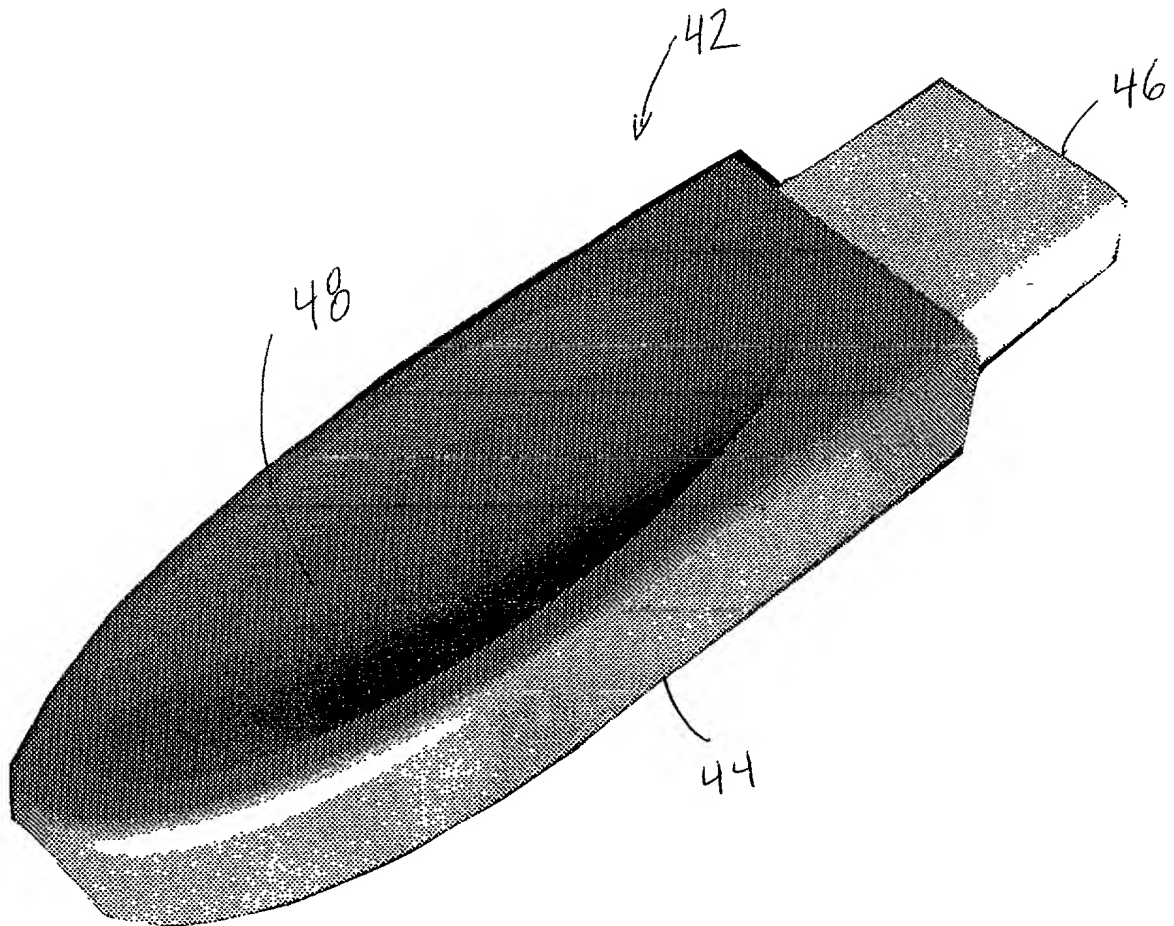


Fig. 2

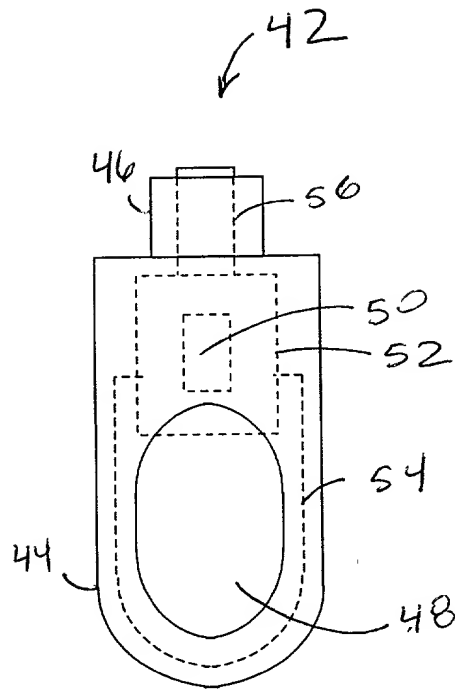


FIG. 3

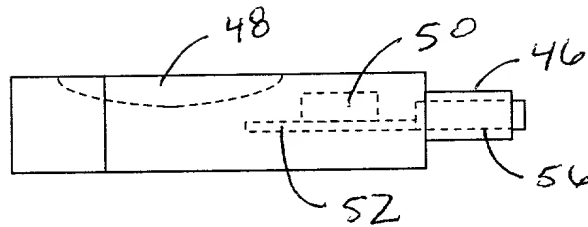


FIG. 4

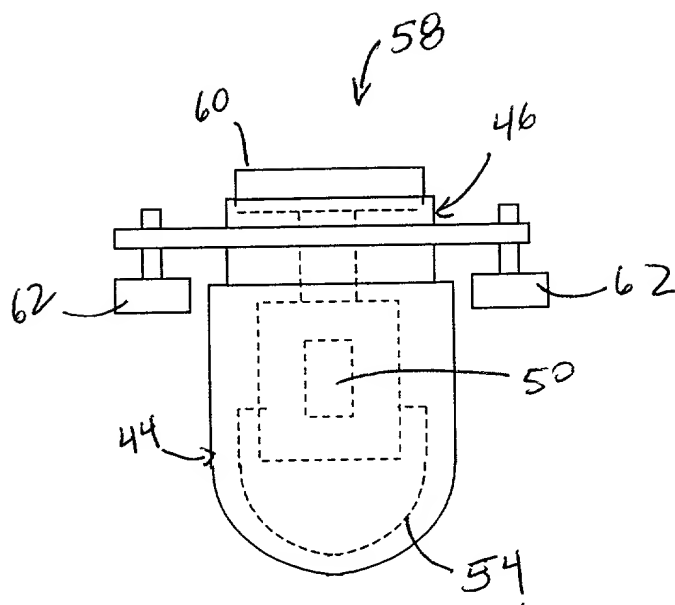


FIG. 7

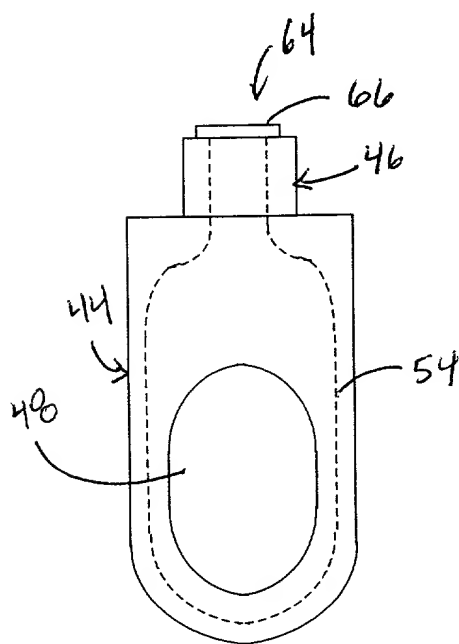


FIG. 8

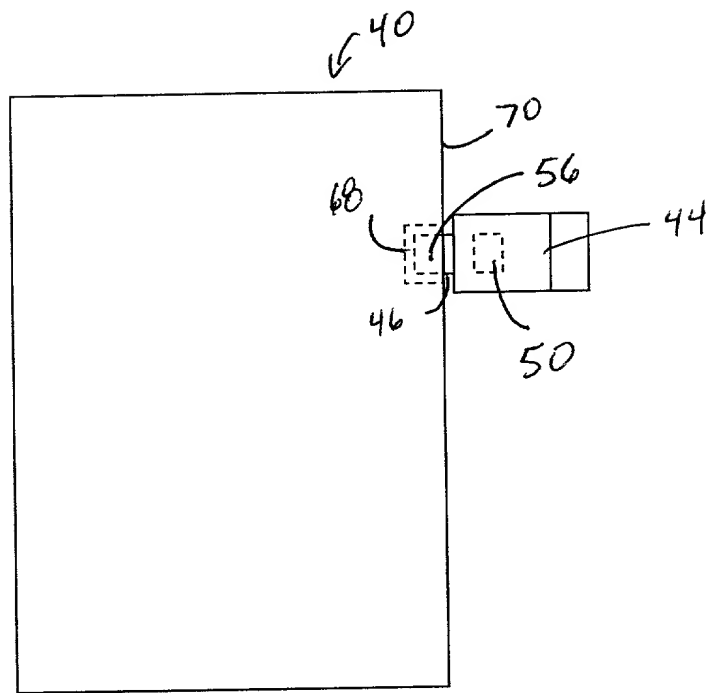


FIG. 9

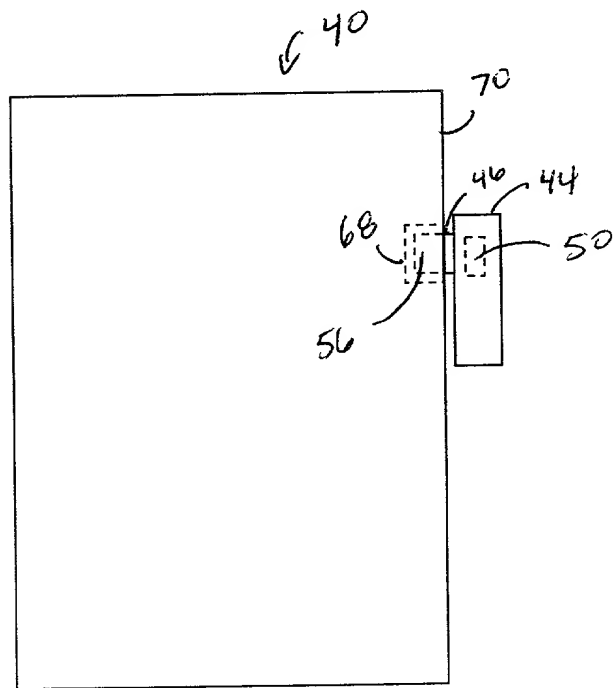


FIG. 10

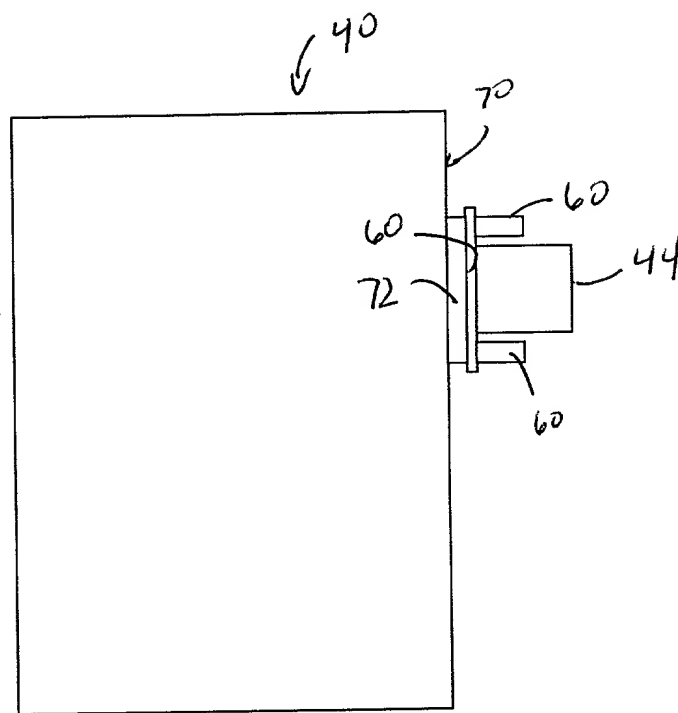


FIG. 11

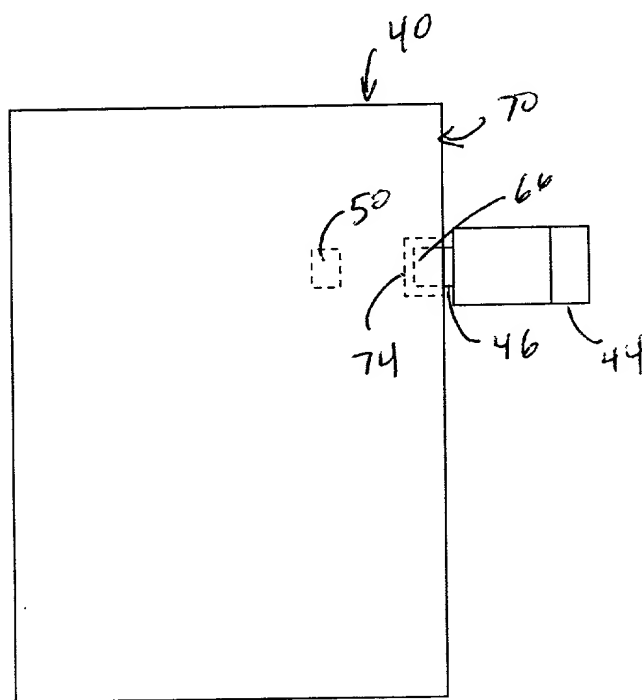


FIG. 12

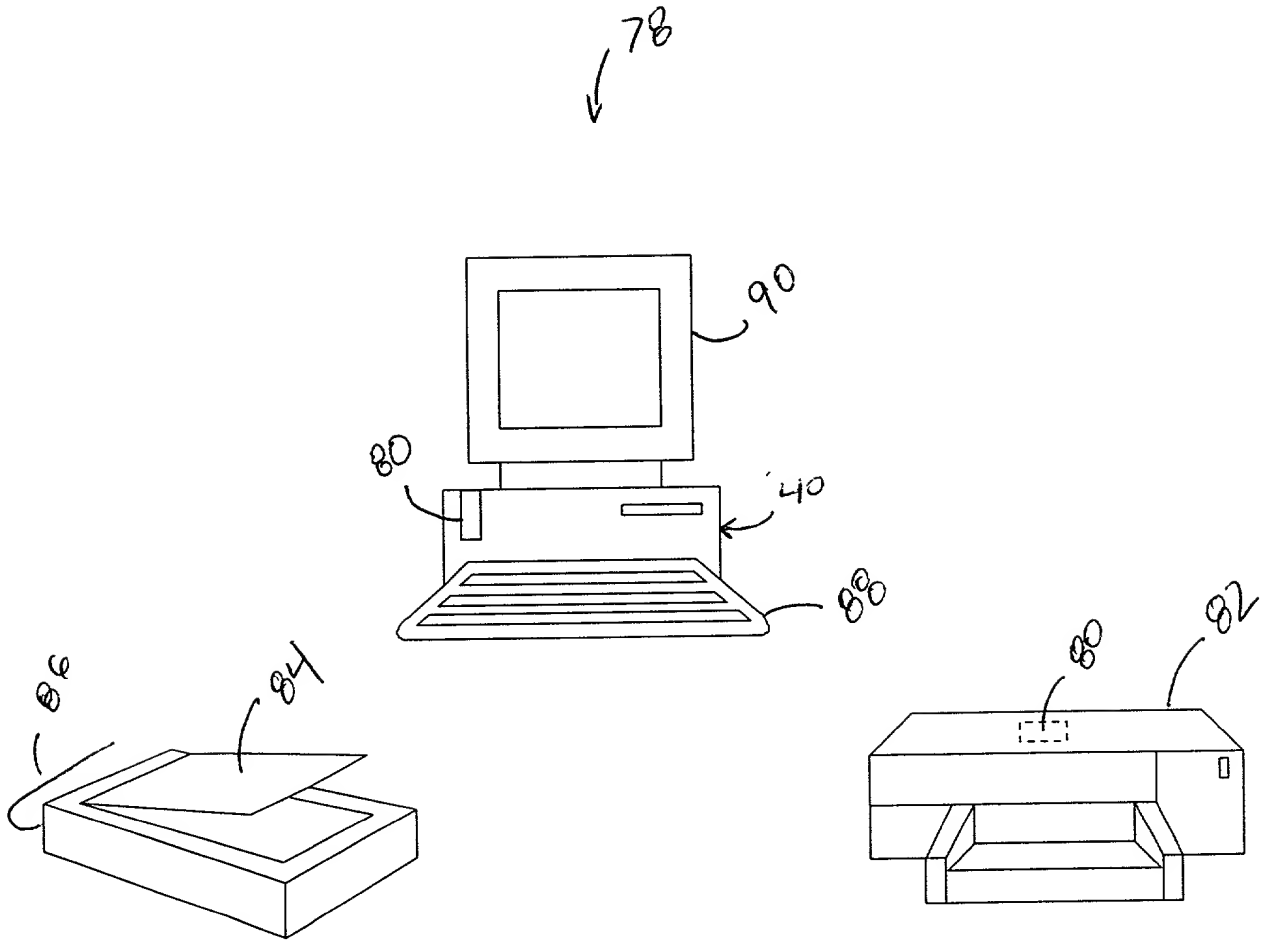


FIG. 13

DECLARATION

SOLE/JOINT INVENTOR
ORIGINAL/SUBSTITUTE/CIP

As a below named inventor, I hereby declare that: my residence, post office address, and citizenship are as stated below next to my name. I believe I am the original, first, and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

WIRELESS COMPUTER SYSTEM HAVING ANTENNA DONGLE

as described in the specification ☒ attached or ☐ of patent Application Serial No. _____
filed _____ and amended on _____

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above; that I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application; that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representative or assigns more than twelve months prior to this application; and that I acknowledge the duty to disclose information of which I am aware which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations § 1.56(a). Such information is material when it is not cumulative to information already of record or being made of record in the application, and


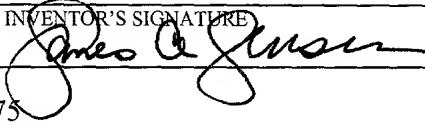
- (1) it establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim; or
- (2) it refutes, or is inconsistent with, a position the applicant has taken or may take in:
 - (i) opposing an argument of unpatentability relied on by the Office, or
 - (ii) asserting an argument of patentability.


I hereby claim foreign priority benefits under Title 35, United States Code § 119 of any foreign application(s) for patent or inventor's certificates listed below and have also identified below any foreign application(s) having a filing date before that of the application(s) on which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE OF FILING	PRIORITY CLAIMED UNDER 35 USC 119
			<input type="checkbox"/> YES <input type="checkbox"/> NO

I hereby claim the benefit under Title 35 United States Code § 120 of any United States application(s) listed below and, insofar as any subject matter of any claim of this application is not disclosed in the prior United States Application, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application and the national PCT international filing date of this application:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF SOLE OR FIRST INVENTOR Ligy Kurian	INVENTOR'S SIGNATURE 	DATE 8/10/00
RESIDENCE 8107 East Copper Lakes Drive, Houston, Texas 77095		CITIZENSHIP U.S.A.
POST OFFICE ADDRESS same as above		
FULL NAME OF SECOND JOINT INVENTOR James A. Jensen	INVENTOR'S SIGNATURE 	DATE 8/10/00
RESIDENCE 16011 Willowpark Drive, Tomball, Texas 77375		CITIZENSHIP U.S.A.
POST OFFICE ADDRESS same as above		

FULL NAME OF THIRD JOINT INVENTOR Paul L. Drew	INVENTOR'S SIGNATURE 	DATE 8.10.00
RESIDENCE 26 Legend Hollow Court, The Woodlands, Texas 77382		CITIZENSHIP U.S.A.
POST OFFICE ADDRESS same as above		

003783-0966960

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant/Patentee:
Ligy Kurian et al.

Filed: Herewith

Serial No.: Unassigned

For: *WIRELESS COMPUTER SYSTEM
HAVING ANTENNA DONGLE*

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Attorney File No.: COMP:0080
P00-2986

POWER OF ATTORNEY BY ASSIGNEE

Under the provisions of 37 C.F.R. § 3.71, the undersigned assignee of record of the entire interest in the above-identified patent/patent application by virtue of an assignment recorded (check as applicable):

X

Concurrently Herewith
Date Recorded
Reel _____ Frame _____

I, the undersigned, do hereby elect to conduct the prosecution of the application/maintenance of the patent to the exclusion of the inventor(s). The undersigned hereby declares that he has reviewed the above-referenced assignment and hereby declares that, to the best of his knowledge, title is in the Assignee, and further declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true. The assignee hereby revokes any previous powers of attorney and appoints the following to prosecute this application/maintain this patent and transact all business in the Patent and Trademark Office connected therewith:

Michael G. Fletcher 32,777
Patrick S. Yoder 37,479
Robert A. Van Someren 36,038
Diana M. Sangalli 40,798

Irene Kosturakis 33,724
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ASSIGNEE
COMPAQ COMPUTER CORPORATION

Date: 11 AUG 2006

BY:

Diane Strong
NAME: Diane Strong
TITLE: Administrator, Patents

Diane Strong
Administrator, Patents
Authorized To Sign This Document On Behalf Of
Compaq Computer Corporation
Pursuant To Board Of Directors Resolution
Date July 28, 1989